

Remarks:

Claims 35 and 36 are being amended to correct an antecedent error that was not previously noticed by Applicant and overlooked by the Examiner. Entry of the amendment is respectfully requested to place the application in better form for either allowance or appeal. No new issues are raised. Entry of this amendment is proper whether or not the Examiner reconsiders the rejection.

Claims 34-47 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,089,182 to Hama (*Hama*). Reconsideration is respectfully requested.

Preliminarily, it is noted that the rejections are under 35 U.S.C. §102(b), not 35 U.S.C. §103(a). It is assumed that this is because the Examiner appreciates that the disclosure of *Hama* is not related to the invention of Applicant or the problem it solves, and accordingly teaches nothing that would render Applicant's invention obvious. The Examiner instead asserts that the structure claimed by Applicant incidentally but literally reads on the structure disclosed by *Hama*. If that were the case, a minor wording change, such as insertion of an adjective throughout the claims, would result in allowance. For example, the introduction of the word "inductively" before "coupled" would further distinguish from *Hama*, which discloses only capacitive coupling of energy from the inductive element to the plasma. In this regard, the Examiner is requested to grant the undersigned a telephone interview to discuss a possible agreement on allowable claim language.

More specifically, it is pointed out that *Hama* does not disclose the subject matter of Applicant's claim 35. For example, in *Hama*, there is no spatially distributed ring of inductively coupled energy in an alternating high and low plasma density distribution from small cross-section segments of the inductor element into the segments of high plasma density in the processing space. From the Examiner's own knowledge of the physics of this technology, it should be obvious that the *Hama* system relies on capacitive coupling from the coil into the plasma. This is produced by *Hama*'s use of an obviously high-impedance coil that produces a significant voltage drop across the conductor's length that generates an electric field that couples into the plasma. See Fig. 11 and the reference to the electric field, but not a magnetic field, throughout the *Hama* patent. [Note: *Hama*'s refers to his apparatus as being "of the

inductive coupling type” in that it is a system having an RF plasma generator that uses a coil, as distinguished from a plate electrode, to excite a plasma, but discloses capacitive (electric field) coupling.]

The Examiner Must Give Weight to the Functional Language in the Claims.

More importantly, it is not disputed that *Hama* fails to disclose structure that provides the recited function of the structure in Applicant’s claims. The only issue is whether the claim language should be given weight. It is submitted that the Examiner’s failure to give patentable weight to the functional limitations in the claims is wrong as a matter of law.

In the rejection of all of the claims, the Examiner ignores structure claimed in means-plus-function language. The Examiner bases this on an erroneous application of the law by citing a case head-note out of context. *In re Danly*, 263 F.2d 844 (CCPA 1959), supports, rather than refutes, Applicant’s position that the Examiner must give patentable weight to the entire recited “means for coupling RF energy from the RF power source into the plasma processing space within the chamber in a spatially distributed ring, around and centered on the axis, in an alternating high and low plasma density distribution” and to other such limitations.

The Court in *In re Danly* held that Danly’s claim 1, which recited “electrical connecting means secured to the nut end of the tie rod, ... , the construction being such that alternating electric current may be passed through the tie rod to heat the same” was obvious over a reference that disclosed structure “such that an alternating current could be passed through the tie rod by merely connecting them with a source of such alternating current.” *In re Danly*, 263 F.2d at 847-848. But the Court further reversed the PTO and held Danly’s claims 3-7 to be patentable that recited “means for connecting the ends of the series-connected tie rods to a source of alternating current potential” even though they “do not positively recite a source of alternating current as an element of the claims.” *In re Danly*, 263 F.2d at 847. The Court gave weight to the function of “connecting the ends of the series-connected tie rods to a source of alternating current potential” in distinguishing the claims over a reference that did not disclose ends of series-connected tie rods actually connected to a source of alternating current potential.

In the present case, *Hama* discloses no “*means for coupling RF energy from the RF power source into the plasma processing space within the chamber in a spatially distributed ring, ..., in an alternating high and low plasma density distribution.*” Therefore, *Hama* does not anticipate any of Applicant’s claims 34-46. Further, *Hama* discloses no “means ... for coupling RF energy through the dielectric window to form a plasma ... having an alternating ring of high and low power density segments in the chamber” Therefore, *Hama* does not anticipate Applicant’s claim 47.

Furthermore, the Examiner’s logic at the bottom of page 4 and top of page 5 of the office action reveals a misunderstanding of 35 U.S.C. §112, sixth paragraph. This results in a backward application of the law. The Examiner states that the “means plus function language has not been given full 35 U.S.C. §112, sixth paragraph, interpretation, since sufficient structural limitations in the claims modify the means-plus-function to achieve the specified function.” It may be correct that the addition of structural limitations to means-plus-function can deprive the inventor of the statutory benefit of a construction “to cover the corresponding structure, material, or acts described in the specification or equivalents thereof.” [35 U.S.C. §112, sixth paragraph.] But the addition of the structural limitations does not remove the limiting effects of the functional language. The structural limitations merely further limit the structure disclosed in the specification and its equivalents to only that structure recited in the claim.

In addition, the rejection is self contradictory. The Examiner gives, as the reason for ignoring the functional clauses of means-plus-function recitations in the claims, the assertion that the claims contain “specific recitations of structural limitations that are sufficient to achieve the specified function.” Yet the Examiner fails to give weight to the functions of those specific structural limitations that the Examiner implies are implicit in the claim language.

In the previous Amendment of January 10, 2008, Applicant replaced the claims with claims in means-plus-function form that are entitled by statute to consideration of certain functional language. The amendment was made to avoid the Examiner’s previous reluctance, in the Office Action of March 23, 2007, to give weight to language deemed by the Examiner to be functional in claims that did not use the means-plus-function form. That Office Action indicated allowable subject matter, which, when

Application No. 10/766,505
Amendment After Final Rejection dated June 13, 2008
Final Office Action mailed April 11, 2008

Applicant amended on June 19, 2007, to accept the Examiner's action, was followed by a rejection issued on September 10, 2007, based on the *Hama* reference, which Applicant submits is functionally unrelated, and which is distinguished by the means-plus-function language in the present claims if properly considered.

For the reasons set forth above, it is submitted that the pending claims are allowable. Accordingly, an early allowance is respectfully requested.

Applicants are of the opinion that no additional fee is due as a result of this Amendment. If any charges or credits are necessary to complete this communication, please apply them to Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

BY /Joseph R. Jordan/
Joseph R. Jordan, Reg. No. 25,686

2700 Carew Tower
Cincinnati, OH 45202
(513) 241-2324
(513) 241-6234 (Facsimile)